

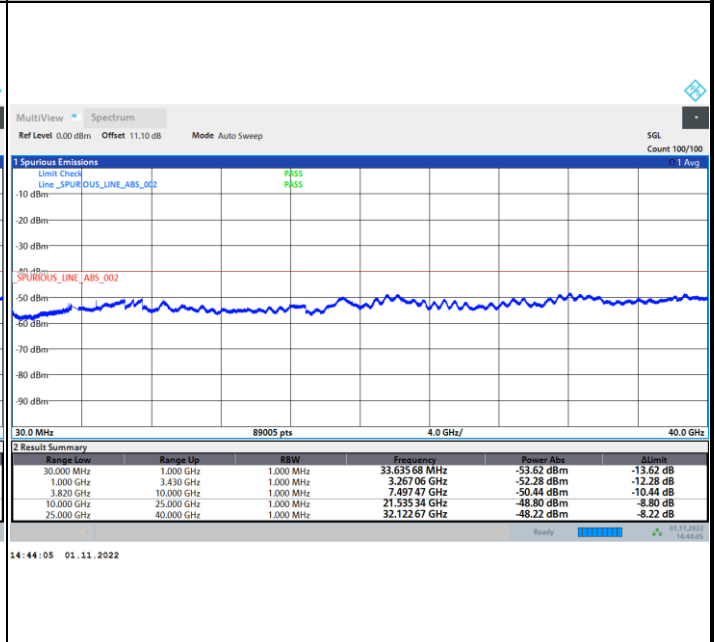
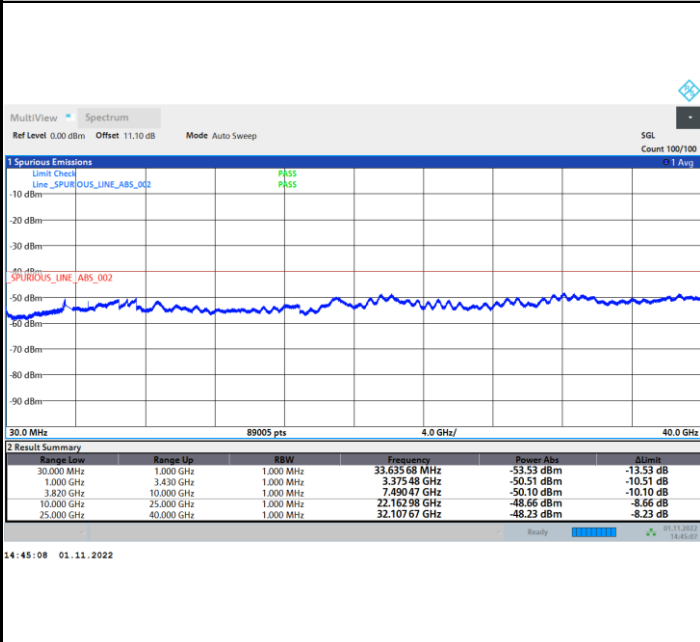


# Conducted Spurious Emission

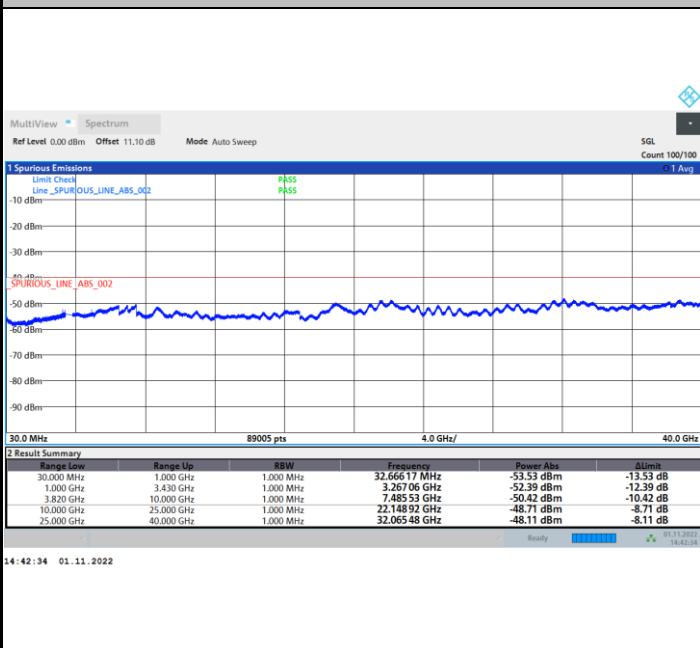
FR1 n48 / 10MHz / DFT-S OFDM / QPSK / 1RB1

## Lowest Channel

## Middle Channel



## Highest Channel

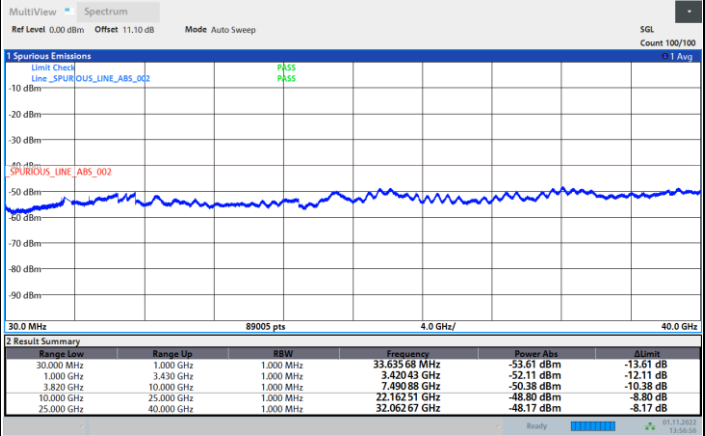
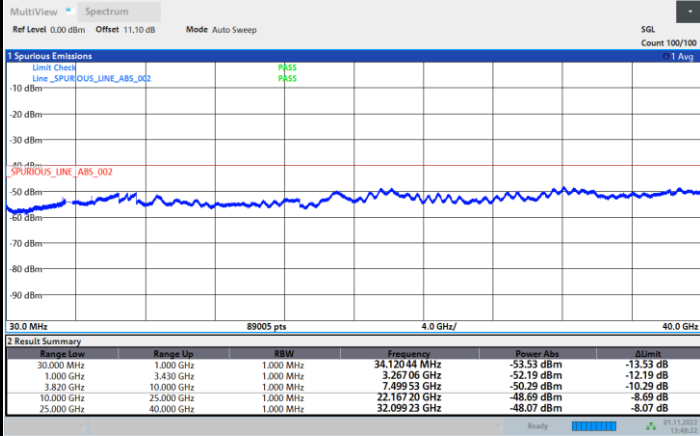




FR1 n48 / 15MHz / DFT-S OFDM / QPSK / 1RB1

Lowest Channel

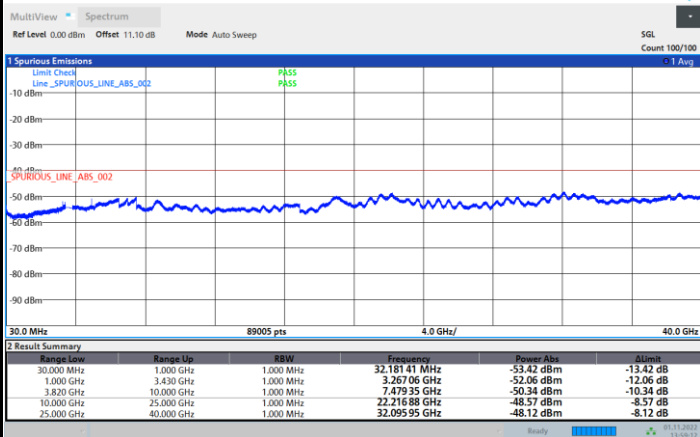
Middle Channel



13:48:23 01.11.2022

13:56:57 01.11.2022

Highest Channel



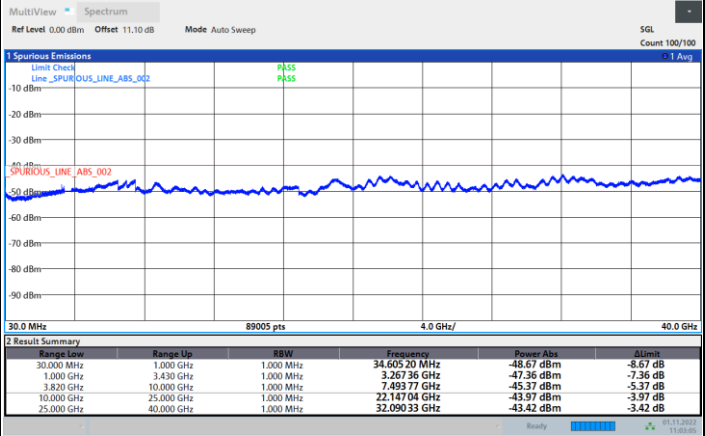
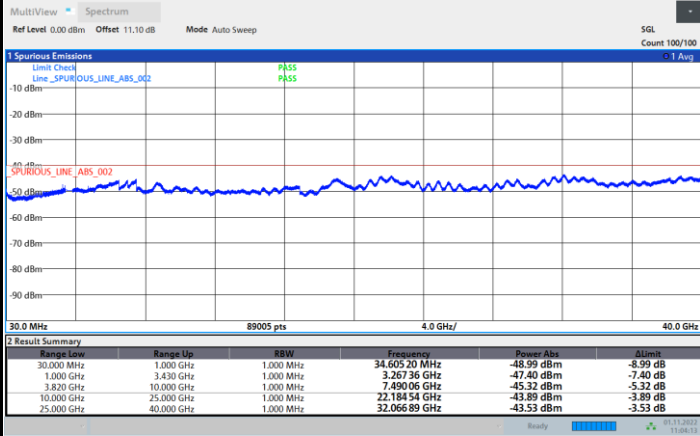
13:59:12 01.11.2022



FR1 n48 / 20MHz / DFT-S OFDM / QPSK / 1RB1

Lowest Channel

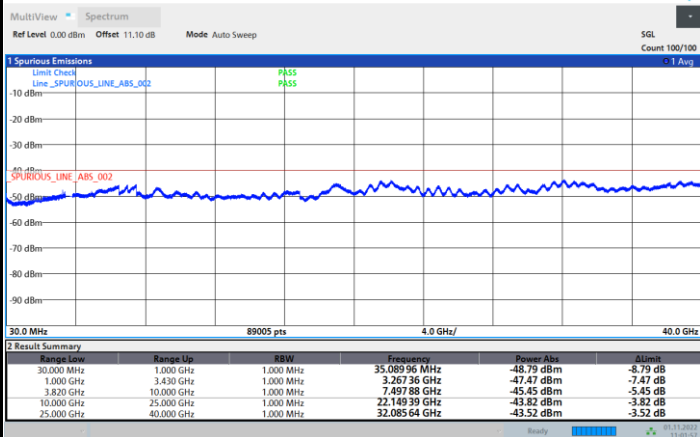
Middle Channel



11:04:13 01.11.2022

11:03:06 01.11.2022

Highest Channel



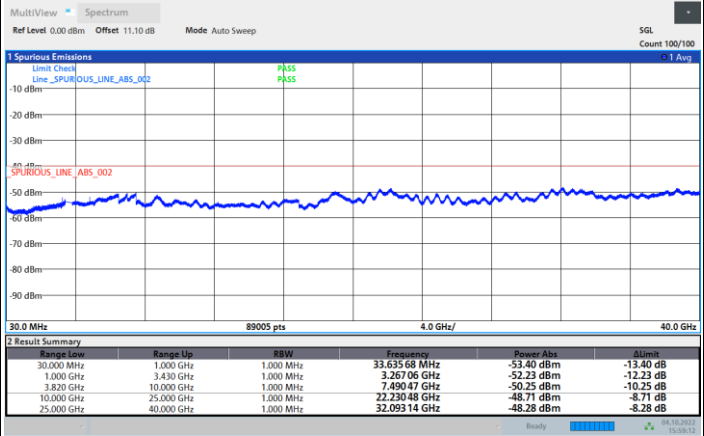
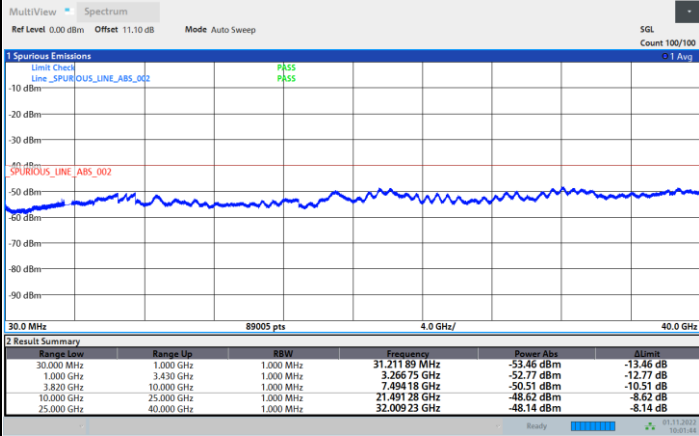
11:01:57 01.11.2022



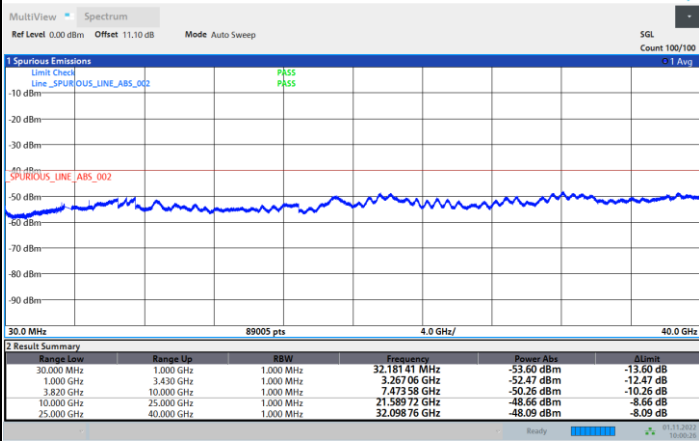
FR1 n48 / 40MHz / DFT-S OFDM / QPSK / 1RB1

Lowest Channel

Middle Channel



Highest Channel





### Frequency Stability

Test Conditions		FR1 n48 (BPSK) / Middle Channel	Limit
Temperature (°C)	Voltage (Volt)	BW 20MHz	Note 2.
		Deviation (ppm)	Result
50	Normal Voltage	0.0010	PASS
40	Normal Voltage	0.0033	
30	Normal Voltage	0.0025	
20(Ref.)	Normal Voltage	0.0000	
10	Normal Voltage	0.0028	
0	Normal Voltage	0.0004	
-10	Normal Voltage	0.0011	
-20	Normal Voltage	0.0015	
-30	Normal Voltage	0.0000	
20	Maximum Voltage	0.0011	
20	Normal Voltage	0.0000	
20	Battery End Point	0.0028	

**Note:**

- 1. Normal Voltage = 3.85 V. ; Battery End Point (BEP) = 3.60 V. ; Maximum Voltage = 4.45 V.
- 2. The frequency fundamental emissions stay within the authorized frequency block.



## Appendix B. Test Results of Radiated Test

<Primary Antenna>

<Ant. 6>

### 5G NR n48

5G NR n48/ 20MHz / PI/2 BPSK									
Channel	Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Margin ( dB )	SPA Reading (dBm)	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	7103	-58.04	-40	-18.04	-55.16	-67.74	1.84	11.54	H
	10654	-54.37	-40	-14.37	-55.97	-62.84	2.23	10.71	H
	14205	-49.90	-40	-9.90	-57.63	-59.53	2.65	12.28	H
	21308	-62.15	-40	-22.15	-75.52	-77.00	3.32	18.17	H
	24859	-59.20	-40	-19.20	-76.48	-73.97	3.71	18.48	H
	28410	-56.79	-40	-16.79	-76.3	-72.26	3.99	19.45	H
									H
	7103	-57.78	-40	-17.78	-55.15	-67.48	1.84	11.54	V
	10654	-54.62	-40	-14.62	-55.81	-63.09	2.23	10.71	V
	14205	-50.20	-40	-10.20	-57.8	-59.83	2.65	12.28	V
	21308	-63.07	-40	-23.07	-76.13	-77.92	3.32	18.17	V
	24859	-58.98	-40	-18.98	-75.94	-73.75	3.71	18.48	V
	28410	-56.86	-40	-16.86	-75.96	-72.33	3.99	19.45	V
	Middle	7232	-56.87	-40	-16.87	-54.35	-66.33	1.86	11.32
10850		-49.78	-40	-9.78	-51.76	-58.15	2.22	10.59	H
14462		-49.52	-40	-9.52	-57.49	-59.02	2.62	12.12	H
18081		-61.71	-40	-21.71	-72.19	-76.08	3.23	17.60	H
21698		-61.24	-40	-21.24	-75.4	-76.41	3.43	18.60	H
25314		-59.24	-40	-19.24	-76.56	-74.24	3.78	18.78	H
									H
7232		-57.43	-40	-17.43	-55.25	-66.89	1.86	11.32	V
10850		-51.19	-40	-11.19	-52.94	-59.56	2.22	10.59	V
14462		-49.52	-40	-9.52	-57.93	-59.02	2.62	12.12	V
18081		-61.96	-40	-21.96	-72.14	-76.33	3.23	17.60	V
21698		-61.36	-40	-21.36	-75.19	-76.53	3.43	18.60	V
25314		-59.88	-40	-19.88	-76.91	-74.88	3.78	18.78	V



Highest	7363	-56.38	-40	-16.38	-54.17	-65.84	1.92	11.38	H
	11044	-53.62	-40	-13.62	-56.04	-61.96	2.22	10.55	H
	14725	-49.98	-40	-9.98	-58.07	-59.98	2.59	12.60	H
	18406	-62.46	-40	-22.46	-73.26	-76.82	3.24	17.60	H
	22088	-61.17	-40	-21.17	-75.74	-76.54	3.52	18.88	H
	25769	-58.83	-40	-18.83	-76.49	-74.00	3.88	19.05	H
									H
	7363	-56.47	-40	-16.47	-54.41	-65.93	1.92	11.38	V
	11044	-53.64	-40	-13.64	-55.99	-61.98	2.22	10.55	V
	14725	-48.70	-40	-8.70	-57.74	-58.70	2.59	12.60	V
	18406	-62.49	-40	-22.49	-73.05	-76.85	3.24	17.60	V
	22088	-61.76	-40	-21.76	-75.95	-77.13	3.52	18.88	V
	25769	-59.09	-40	-19.09	-76.46	-74.26	3.88	19.05	V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



<Ant. 2 + Ant. 6>

EN-DC 66A-n48A

EN-DC 66A-n48A / 40MHz / PI/2 BPSK									
Channel	Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Margin ( dB )	SPA Reading (dBm)	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	7105	-58.75	-40	-18.75	-55.88	-68.45	1.84	11.54	H
	10657	-54.96	-40	-14.96	-56.57	-63.43	2.23	10.71	H
	14209	-52.28	-40	-12.28	-60.01	-61.91	2.65	12.27	H
	21314	-63.27	-40	-23.27	-76.66	-78.13	3.32	18.18	H
	24866	-59.70	-40	-19.70	-76.98	-74.47	3.71	18.48	H
	28418	-56.83	-40	-16.83	-76.34	-72.29	3.99	19.45	H
									H
	7105	-58.79	-40	-18.79	-56.17	-68.49	1.84	11.54	V
	10657	-55.02	-40	-15.02	-56.23	-63.49	2.23	10.71	V
	14209	-52.49	-40	-12.49	-60.1	-62.12	2.65	12.27	V
	21314	-63.94	-40	-23.94	-77.02	-78.80	3.32	18.18	V
	24866	-59.94	-40	-19.94	-76.9	-74.71	3.71	18.48	V
	28418	-57.05	-40	-17.05	-76.15	-72.51	3.99	19.45	V
									V
Middle	7215	-59.27	-40	-19.27	-56.7	-68.73	1.85	11.31	H
	10822	-54.36	-40	-14.36	-56.3	-62.75	2.22	10.61	H
	14429	-52.92	-40	-12.92	-60.87	-62.44	2.63	12.14	H
	18036	-61.85	-40	-21.85	-72.29	-76.22	3.23	17.60	H
	21644	-62.13	-40	-22.13	-76.24	-77.26	3.41	18.54	H
	25251	-60.23	-40	-20.23	-77.54	-75.17	3.76	18.70	H
									H
	7215	-58.88	-40	-18.88	-56.68	-68.34	1.85	11.31	V
	10822	-56.50	-40	-16.50	-58.18	-64.89	2.22	10.61	V
	14429	-52.81	-40	-12.81	-61.11	-62.33	2.63	12.14	V
	18036	-62.24	-40	-22.24	-72.37	-76.61	3.23	17.60	V
	21644	-62.42	-40	-22.42	-76.2	-77.55	3.41	18.54	V
	25251	-60.48	-40	-20.48	-77.5	-75.42	3.76	18.70	V
									V





Highest	7325	-56.97	-40	-16.97	-54.67	-66.43	1.90	11.36	H
	10987	-49.51	-40	-9.51	-51.78	-57.82	2.20	10.51	H
	14649	-50.49	-40	-10.49	-58.55	-60.32	2.60	12.43	H
	18311	-62.93	-40	-22.93	-73.63	-77.29	3.24	17.60	H
	21974	-62.78	-40	-22.78	-77.22	-78.15	3.50	18.87	H
	25636	-59.30	-40	-19.30	-76.79	-74.47	3.85	19.03	H
									H
	7325	-56.89	-40	-16.89	-54.8	-66.35	1.90	11.36	V
	10987	-53.62	-40	-13.62	-55.79	-61.93	2.20	10.51	V
	14649	-49.57	-40	-9.57	-58.44	-59.40	2.60	12.43	V
	18311	-61.64	-40	-21.64	-72.08	-76.00	3.24	17.60	V
	21974	-63.07	-40	-23.07	-77.14	-78.44	3.50	18.87	V
	25636	-59.40	-40	-19.40	-76.62	-74.57	3.85	19.03	V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



<ASDIV Antenna>

<Ant. 2>

5G NR n48

5G NR n48/ 20MHz / PI/2 BPSK									
Channel	Frequency ( MHz )	ERP ( dBm )	Limit ( dBm )	Margin ( dB )	SPA Reading (dBm)	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	7103	-57.89	-40	-17.89	-55.01	-67.59	1.84	11.54	H
	10654	-48.42	-40	-8.42	-50.02	-56.89	2.23	10.71	H
	14205	-50.32	-40	-10.32	-58.05	-59.95	2.65	12.28	H
	21308	-62.46	-40	-22.46	-75.83	-77.31	3.32	18.17	H
	24859	-59.59	-40	-19.59	-76.87	-74.36	3.71	18.48	H
	28410	-56.86	-40	-16.86	-76.37	-72.33	3.99	19.45	H
	7103	-57.93	-40	-17.93	-55.3	-67.63	1.84	11.54	V
	10654	-45.37	-40	-5.37	-46.56	-53.84	2.23	10.71	V
	14205	-50.33	-40	-10.33	-57.93	-59.96	2.65	12.28	V
	21308	-62.67	-40	-22.67	-75.73	-77.52	3.32	18.17	V
	24859	-59.47	-40	-19.47	-76.43	-74.24	3.71	18.48	V
	28410	-56.96	-40	-16.96	-76.06	-72.43	3.99	19.45	V
Middle	7232	-57.97	-40	-17.97	-55.45	-67.43	1.86	11.32	H
	10850	-46.47	-40	-6.47	-48.45	-54.84	2.22	10.59	H
	14462	-50.13	-40	-10.13	-58.1	-59.63	2.62	12.12	H
	18081	-61.57	-40	-21.57	-72.05	-75.94	3.23	17.60	H
	21698	-61.47	-40	-21.47	-75.63	-76.64	3.43	18.60	H
	25314	-59.22	-40	-19.22	-76.54	-74.22	3.78	18.78	H
									H
	7232	-57.69	-40	-17.69	-55.51	-67.15	1.86	11.32	V
	10850	-47.33	-40	-7.33	-49.08	-55.70	2.22	10.59	V
	14462	-49.55	-40	-9.55	-57.96	-59.05	2.62	12.12	V
	18081	-61.48	-40	-21.48	-71.66	-75.85	3.23	17.60	V
	21698	-61.17	-40	-21.17	-75	-76.34	3.43	18.60	V
	25314	-59.35	-40	-19.35	-76.38	-74.35	3.78	18.78	V
									V



Highest	7363	-56.44	-40	-16.44	-54.23	-65.90	1.92	11.38	H
	11044	-49.84	-40	-9.84	-52.26	-58.18	2.22	10.55	H
	14725	-49.96	-40	-9.96	-58.05	-59.96	2.59	12.60	H
	18406	-62.19	-40	-22.19	-72.99	-76.55	3.24	17.60	H
	22088	-61.26	-40	-21.26	-75.83	-76.63	3.52	18.88	H
	25769	-59.17	-40	-19.17	-76.83	-74.34	3.88	19.05	H
									H
	7363	-56.45	-40	-16.45	-54.39	-65.91	1.92	11.38	V
	11044	-47.69	-40	-7.69	-50.04	-56.03	2.22	10.55	V
	14725	-48.64	-40	-8.64	-57.68	-58.64	2.59	12.60	V
	18406	-62.31	-40	-22.31	-72.87	-76.67	3.24	17.60	V
	22088	-61.94	-40	-21.94	-76.13	-77.31	3.52	18.88	V
	25769	-59.17	-40	-19.17	-76.54	-74.34	3.88	19.05	V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



<Ant. 0 + Ant. 2>

**EN-DC 66A-n48A**

EN-DC 66A-n48A / 40MHz / PI/2 BPSK									
Channel	Frequency ( MHz )	EIRP ( dBm )	Limit ( dBm )	Margin ( dB )	SPA Reading (dBm)	S.G. Power ( dBm )	TX Cable loss ( dB )	TX Antenna Gain (dBi)	Polarization (H/V)
Lowest	7105	-59.12	-40	-19.12	-56.25	-68.82	1.84	11.54	H
	10657	-56.52	-40	-16.52	-58.13	-64.99	2.23	10.71	H
	14209	-52.76	-40	-12.76	-60.49	-62.39	2.65	12.27	H
	21314	-63.96	-40	-23.96	-77.35	-78.82	3.32	18.18	H
	24866	-60.23	-40	-20.23	-77.51	-75.00	3.71	18.48	H
	28418	-56.70	-40	-16.70	-76.21	-72.16	3.99	19.45	H
									H
	7105	-57.96	-40	-17.96	-55.34	-67.66	1.84	11.54	V
	10657	-56.75	-40	-16.75	-57.96	-65.22	2.23	10.71	V
	14209	-52.62	-40	-12.62	-60.23	-62.25	2.65	12.27	V
	21314	-63.77	-40	-23.77	-76.85	-78.63	3.32	18.18	V
	24866	-60.47	-40	-20.47	-77.43	-75.24	3.71	18.48	V
	28418	-57.51	-40	-17.51	-76.61	-72.97	3.99	19.45	V
									V
Middle	7215	-59.03	-40	-19.03	-56.46	-68.49	1.85	11.31	H
	10822	-56.02	-40	-16.02	-57.96	-64.41	2.22	10.61	H
	14429	-52.76	-40	-12.76	-60.71	-62.28	2.63	12.14	H
	18036	-61.71	-40	-21.71	-72.15	-76.08	3.23	17.60	H
	21644	-61.28	-40	-21.28	-75.39	-76.41	3.41	18.54	H
	25251	-59.44	-40	-19.44	-76.75	-74.38	3.76	18.70	H
									H
	7215	-58.85	-40	-18.85	-56.65	-68.31	1.85	11.31	V
	10822	-56.68	-40	-16.68	-58.36	-65.07	2.22	10.61	V
	14429	-52.81	-40	-12.81	-61.11	-62.33	2.63	12.14	V
	18036	-61.98	-40	-21.98	-72.11	-76.35	3.23	17.60	V
	21644	-63.00	-40	-23.00	-76.78	-78.13	3.41	18.54	V
	25251	-60.45	-40	-20.45	-77.47	-75.39	3.76	18.70	V
									V



Highest	7325	-57.44	-40	-17.44	-55.14	-66.90	1.90	11.36	H
	10987	-55.23	-40	-15.23	-57.5	-63.54	2.20	10.51	H
	14649	-53.43	-40	-13.43	-61.49	-63.26	2.60	12.43	H
	18311	-63.81	-40	-23.81	-74.51	-78.17	3.24	17.60	H
	21974	-63.47	-40	-23.47	-77.91	-78.84	3.50	18.87	H
	25636	-59.73	-40	-19.73	-77.22	-74.90	3.85	19.03	H
									H
	7325	-57.51	-40	-17.51	-55.42	-66.97	1.90	11.36	V
	10987	-54.82	-40	-14.82	-56.99	-63.13	2.20	10.51	V
	14649	-52.44	-40	-12.44	-61.31	-62.27	2.60	12.43	V
	18311	-63.93	-40	-23.93	-74.37	-78.29	3.24	17.60	V
	21974	-63.85	-40	-23.85	-77.92	-79.22	3.50	18.87	V
	25636	-59.90	-40	-19.90	-77.12	-75.07	3.85	19.03	V
									V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

————THE END————